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ORIGINAL DEPARTMENT.

LECTURE.

VI. PULMONARY PHTHISIS.

Delivered at the Philadelphia Hospital, December 24th, 1879,

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REPORTED BY WM. H. MORRISON, M.D.

GENTLEMEN:—At the last lecture I called your attention to hæmoptysis, its significance, and the conditions under which it occurs. I told you that in certain cases hemorrhage is the initial cause of phthisis. This relation of hemorrhage to phthisis has, of late, been considered pretty frequent, but I think that it is rather rare; much more frequently, in my experience, hemorrhage occurring early has been a symptom of an acute congestion or catarrhal pneumonia, and could not be regarded as the direct cause of the lesions that followed. It is only when we have hemorrhage occurring in a person whose lungs have previously been perfectly healthy, followed by catarrhal pneumonia, cheesy degeneration and phthisis, that we can regard it as the starting point of the disease.

Now, as to the treatment of this complication. Something will depend upon the condition of the patient and the state of the lung. As regards drugs, I do not know anything more difficult than to estimate the value of remedies in hæmoptysis. The hemorrhage frequently stops spontaneously. There are certain things to be done in the treatment of all cases. In the first attack you rarely have time to make an accurate diagnosis as to the condition of the lung and the exact seat of hemorrhage. You must first try to arrest the hemorrhage, and then determine the condition of the lung. An essential element of the treatment is absolute and perfect rest in bed, avoidance of talking, and the suppression of cough as far as possible. Then, everything which renders respiration easier should be encouraged. Nothing should obstruct the neck and chest. The room should be cool, the head and shoulders elevated, and the patient should swallow little pieces of ice. I think that the cold exercises some influence in checking the hemorrhage. All the nourishment should be cold and non-stimulating; as, for instance, cold milk and meat broths. We will see later that the debility of the system is sometimes so great that we have to resort to stimulants in order to maintain the circulation. As to the local application of cold to the outside of the chest, I do not think that this is advisable. It is probably true that if we could localize the seat of the hemorrhage, and if it was superficial, the cold pack might aid in checking it, but I think that the risk of the bad effects from the cold would be too great. I would prefer to resort to dry cupping over the back and front of the chest, over the spot from which the blood comes, if this can be located; but where you cannot locate the exact seat, a dozen dry cups may be applied over the back and front of the chest, if it can be done without disturbing the patient too much.

Of drugs, ergot seems to be the most powerful in checking hæmoptysis. The extractum ergotæ fluid. may be given in doses of a teaspoonful every fifteen minutes, until the hemorrhage is stopped, and then continued in smaller doses, or it may be given by hypodermic injection, in doses of

gtt. xv, or ergotine may be used. If the stomach is irritable, gr. v of ergotine may be given, per rectum. Sometimes ergot will have no appreciable effect. Under such circumstances I think that gallic acid is the next best remedy. I frequently combine it with aromatic sulphuric acid, which makes a more efficient and pleasant mixture:—

℞. Acidi gallici, ʒij
Acidi sulphurici aromat., f. ʒj
Glycerinæ, f. ʒj
Aquæ, q. s. ut ft. f. ʒ vj. M.

Sig.—A tablespoonful, as required.

This is to be given every hour, every half-hour, or at shorter intervals, until the hemorrhage is brought under control. This, I think, ranks next to ergot, and where the stomach refuses ergot, or where ergot produces no effect, I usually resort to this combination.

You will observe that, so far, I have made no mention of the use of opium, which should be given to control the cough, quiet nervous irritability and allay vascular excitability. The opium may be given, either by suppository, by hypodermic injection of morphia, or the deodorized tincture may be added to the ergot or gallic acid combination. I prefer the use of opium to that of morphia in the condition I am now describing. For internal use, I think there is no preparation of opium equal to the deodorized tincture, the tinctura opii deodorata. Where the stomach is irritable, suppositories of opium or hypodermic injection of morphia may be used. The amount must be determined by the effects, but patients with hemorrhage will bear large quantities of opium. The proper method is to give small doses frequently repeated, until the desired effect is produced.

Sometimes the patient passes into a state of obstinate bleeding, lasting, not for an hour or two, but for several days, with evidence of severe congestion of some portion of the lung; and you may find that ergot, gallic acid and aromatic sulphuric acid fail to check it; we then come to the mineral astringents; of these, I think the best is acetate of lead, and next sulphate of copper. These should be given in pill form, with opium; but I do not think that they are so useful for producing an immediate effect as ergot and gallic acid.

Suppose we are able to tell where the hemorrhage comes from. Take a patient who has been healthy, has had no cough, no evidence of lung trouble; he begins to spit blood, but this is checked, in great part, by one of the means already mentioned; still it continues in small quantity; an examination of the lung reveals no solidification, no râles, no evidence of any disease; here we must conclude that the hemorrhage has, in all probability, come from the bronchial mucous membrane. In such a case astringent inhalations are very useful. They may consist of solutions of Monsel's salt, tannic acid or other astringent, which, by being forcibly drawn in, may reach the seat of hemorrhage. In cases where the hæmoptysis is due to an acute congestion of the vesicular structure, or to an acute catarrhal pneumonia, you will find inhalations of no material service. I doubt if they get far enough down to affect the bleeding spot.

I have spoken of derivation by dry cupping: this I think is an exceedingly important mode of treatment, and it becomes more important in proportion as you are able to localize the seat of hemorrhage, and to determine that it comes from a congestion of some portion of the lung, or from the seat of a catarrhal pneumonia. In such cases, I think that local depletion by dry cupping, or if there is a high degree of vascular excitement, with fever, and if the patient is strong, by wet cupping, is an exceedingly valuable means of arresting the hemorrhage.

Sometimes a patient with hæmoptysis, either from a previous weakening of the system by phthisis, or from the excessive amount of blood lost, or else from the severity of the local disease with which he has been attacked, falls into a very weak state, with rapid, shallow breathing, a rapid, feeble pulse and marked muscular prostration. Bleeding, under these circumstances, becomes dangerous, and occasionally we find a continual oozing of blood, which may even go on to a fatal result. Here we have to treat not only the hemorrhage, but also the constitutional condition of the patient, which verges on to the typhoid state. This condition often occurs in severe pulmonary congestion, where the system has been run down, or where the congestion involves a large part of the lung and is attended with this hemorrhage. In these cases the patient's strength must be supported by quinia, given freely. In order to avoid irritating the stomach, it is sometimes better to give the quinia by suppository. This drug also acts as an astringent by increasing the tone of the vessels. Digitalis, which acts in a similar manner, should also be given. It may be given in the form of the tincture or the infusion associated with astringents by the mouth. If I found that the appetite had disappeared, that the tongue was foul and coated, and that sordes had begun to form on the

teeth, I would associate turpentine with the quinia and digitalis, in place of other astringents. In this low condition turpentine is a valuable remedy, both for its hæmostatic power and for its influence over the typhoid state. I have met with cases where quinia, digitalis, turpentine, good nourishment, and a moderate amount of alcoholic stimulus carried the patient through an attack of hemorrhage, where I am sure an attempt to keep up the use of astringents or to use stronger ones would have resulted in death.

Finally, in those cases in which hemorrhage takes place from a cavity, owing to the ulceration or rupture of a blood vessel, our treatment has, I think, little or no power to arrest the bleeding, for if the vessel is large and the opening is free, the patient will die; but if the opening is small or valvular, the bleeding may stop spontaneously; but I do not think that we have any means of arresting such hemorrhage. Possibly, astringent inhalations might reach the part and thus favor coagulation of the blood, but at the time of hemorrhage they can scarcely be used. I have suggested, but never tried the operation of introducing the needle of a hypodermic syringe directly into the part and injecting some astringent solution. This, I think, would be attended with risk, and as I think the general proposition I have just made holds good, *i. e.*, if the opening is large the patient will die, and if it is small the bleeding may stop spontaneously, the treatment I would recommend is to sustain the patient's strength, keep him perfectly quiet and administer opium.

Even where we have a cavity, we cannot be sure that the hemorrhage comes from the rupture of a vessel, and so we should not neglect the use of other astringents, for it is quite possible that the hæmoptysis is due to a fresh attack of catarrhal pneumonia, or an acute congestion of the surrounding tissue. It is only where there is a large amount of florid, arterial blood, not mixed with air bubbles, thrown off, that we can be sure that it comes from the rupture of a vessel of considerable size.

The next complication to which I shall ask your attention is diarrhœa. Several of our patients have presented this symptom. It has been quite marked in the man before you, who has also a little hæmoptysis, probably the result of a slight acute congestion, from exposure. Diarrhœa occurs in a great many cases of chronic phthisis. In some it becomes so troublesome that it forms a most serious complication, and may even be a cause of death. This used to be described under the head of tuberculous diarrhœa, and frequently you will see the statement that diarrhœa occurring in a patient with phthisis is very significant of the development of tubercle. This is a very imperfect and partial expression of the truth, the real fact being, that the relations of diarrhœa to phthisis are by no means simple, and that the same mistake has been made in regard to the condition of the gastro-intestinal mucous membrane that has been made as to the condition of the lung in phthisis. We may say, at once, that any patient with centres of cheesy degeneration and disintegration of the lung structure is liable to have his system infected and get tubercle, and that the eruption of tubercle may occur either in the lung or in some other organ, and among the other organs which may be affected stands, perhaps not first, but among the first, the mucous membrane of the bowel, particularly its follicular structure; so that patients who have true tubercles forming in the course of phthisis are in danger of having intestinal tubercles develop, and under such circumstances there will be tubercular ulcers in the intestines, causing a diarrhœa of an intractable and incurable character. Such diarrhœa comes on, as a rule, very late in the course of the case, and does not long precede death, since not only will there be tuberculosis of the intestinal mucous membrane, but also tuberculosis of the lung, and probably of other organs. The whole system is involved, the whole nutrition is impaired, and therefore it is that such diarrhœa cannot long precede death.

But far more frequently the diarrhœa is of a catarrhal nature, and depends on the same weakness of system and want of proper tone of the skin upon which the attack of pulmonary congestion, or catarrhal pneumonia has depended. So that a patient who is in this state, after he has had a local lesion of his lung developed, and whose cutaneous circulation is checked, may have produced an increased congestion of his lung; or it may affect the throat, or larynx, or the intestinal mucous membrane; and the same want of tone and want of reaction that makes the lung trouble run a chronic course makes this congestion of the mucous membrane obstinate and apt to leave behind catarrhal thickening of the membrane and enlargement of the follicles. So that such attacks occurring in phthisical patients do not tend to pass on to recovery, as they do in healthy subjects. In some cases you will find repeated attacks of this kind occurring; and that, after you have checked the diarrhœa by means of dietetic and other treatment, the attacks recur every couple

of weeks, last a day or two, and then die away, to come back on the slightest provocation. There is not, in such cases, as is often said, repeated attacks of tubercles in the bowels. In these cases the diarrhœa is often regarded as due to an incurable lesion, and the proper treatment is not employed. What we really have is a chronic follicular catarrh, with thickening of the mucous membrane; these follicles may ulcerate, and the mucous membrane be covered all over with little round or oval ulcers, but not a single tubercle may be found. This, I say, is by far the most frequent relation of diarrhœa to phthisis.

We have seen that when a patient who has a marked tuberculous diathesis has ulceration of his lung, he is apt to absorb septic matter, and get a general tuberculosis; now, if this is true in regard to the lung, it is also true of the gastro-intestinal mucous membrane, and so we may have following these ulcers of the intestine tuberculosis of the membrane. You may examine the lungs, and find all the lesions of chronic destructive catarrhal pneumonia, but no miliary tubercle, while in the intestine there are found numerous ulcers with tubercles developed around them.

The relations of diarrhœa to phthisis are, therefore, as I have said, not simple and invariable, and you will be prepared to find that the success of treatment is not uniform.

I need say nothing about the severity of the diarrhœa; this will depend upon the amount of local lesion. It may be only one soft, murky stool per day, or in severe cases the stools may be frequent and watery. The character of the stools will depend upon the condition of digestion, and the kind of food taken, and whether or not there is ulceration of the bowel. I would say that the fact that a patient has a single murky stool daily is a most serious complication in his case. He may never think of alluding to it, or may, indeed, think that it is rather a favorable occurrence; but in reality there is no more subtle and certainly destructive process than the slightest looseness of the bowels, if continued, particularly when it occurs in a weak state of the system. It is not merely the loss of the serum of the blood, amounting perhaps to two or three ounces in twenty-four hours, but it is also the fact that the peristaltic action of the bowels is, in such cases, too rapid—the ingesta are not thoroughly digested, and the nutritious elements are not absorbed—that makes this a dangerous complication, and deserving of the most careful treatment; for the nutrition suffers, both by what it fails to absorb and by what is excreted. As the stools increase in frequency to two or three or more a day, the complication becomes more serious. I never wait for the patient to tell me, of his own accord, that his bowels are loose, but tell him to report to me the first loose stool he has.

Now, as to the treatment. Rest in bed, I should say, was essential in such cases, for I assure you, if the patient is allowed to go about and the diarrhœa to continue, you will find great difficul y in stopping it. Rest in bed, then, with absolute liquid diet of the most nutritious character, consisting of milk, arrow-root, meat broths, finely minced meat, and other articles of this kind, must be continued until the tendency has been entirely overcome and the stools have been normal for a day or two. A moderate amount of opium must be used, to control the tendency to diarrhœa. As to astringents, nitrate of silver, given in minute doses, guarded by opium, is, I think, a most valuable remedy. Bismuth does well in most cases. Sugar of lead or tannic acid with opium is also very good. Aromatic sulphuric acid with sulphate of morphia, and camphor solution will do very well in many cases. The nitrate of silver may be given in pill form, or in small doses dissolved in the syrup of acacia.

If you find that there is a widespread catarrh, with involvement of the duodenum, and extension of irritation into the bile ducts with obstruction to the flow of bile, I would advise you to preface the treatment by small doses of calomel, soda and opium, given for a few days until the tongue begins to clean and the character of the stools shows that the bile passes freely. Then you may substitute nitrate of silver and opium, or one of the other astringents. Such patients are very susceptible to the action of mercury, and we must use the calomel in small doses. It may be given according to the following formula:—

R.	Hydrarg. chloridi mite,	gr.ij
	Sodii bicarb.,	ʒj
	Pulv. opii,	gr.iij. M.

Ft. pulv. No. xij.

Sig.—One every four hours.

These are to be taken until they produce the desired effect, or are all taken.

In reading medical books and papers, you will frequently see specifics for tuberculous diarrhœa—the last one I saw was coto bark—but you will find them all fallacious. Many of them are, no doubt, good astringents, but their effect is no better than that of any other astringent given in a proper dose; and to recommend any drug as a specific for the condition I have described is

utterly absurd. This complication, then, of diarrhœa, is an exceedingly important one; it wastes the patient's strength and flesh, it renders him still more susceptible to damp and cold and predisposed to extension of his lung trouble, and consequently it may be ranked among the most serious complications and deserving of the most careful treatment.

The last of these great complications is the laryngeal complication, or as it is called tuberculous laryngitis; but just as we have seen in the case of phthisical diarrhœa, many of these cases are not tuberculous at all. Laryngitis occurring in the course of phthisis may be an expression of tuberculosis, and we may find miliary tubercles in the follicles of the mucous membrane, but patients with phthisis are very liable to get attacks of ordinary catarrhal laryngitis, and such attacks are, for precisely the same reason as in the case of the diarrhœa, apt to become troublesome and leave behind lasting lesions, thickening of the membrane and enlargement of the follicles, with hypersecretion. These cases of chronic laryngitis may be developed without there being any tubercle in the case, or it may be due to tubercles forming at the beginning of the attack or developed later, after the irritation has lasted for some time. Here we have an explanation of the fact that in many cases we are able to effect a cure, while in others we utterly fail. After true miliary tubercles have formed in the larynx, I fancy that an arrest of the disease is of the rarest occurrence, for the state of the system and the presence of these tubercles and ulcers favor increased congestion, and the course of the disease is steadily downward. In cases where the lesion is of a catarrhal character, you may, by judicious treatment, greatly relieve if not cure the catarrhal trouble.

Sometimes the patient has his laryngeal trouble before the phthisis; he is disposed to have catarrhal attacks affecting the larynx, which run into a chronic form; ulceration occurs. He then gets a catarrhal pneumonia, which runs into phthisis. But more frequently he has had phthisis for some time, he gets a little hoarseness, which becomes more marked, articulation is painful; later, pain on swallowing is complained of, and finally the patient becomes almost aphonic, speaking with the greatest difficulty. He has frightful attacks of laryngeal cough, very painful, and spasmodic; these attacks are often brought on by talking or attempting to swallow. Deglutition becomes very painful, and particles of food get into the larynx and bring on these attacks of coughing. In some cases the patient becomes completely aphonic, and unable to swallow, so that this may become one of the worst complications of phthisis. There is no other that causes so much suffering, and hurries the patient downward so rapidly, as this.

Fortunately, by means of the laryngoscope, we are able to demonstrate the character and seat of the lesion. On examination, you will find the mucous membrane of the aryteno-epiglottidean folds red and swollen, the arytenoid cartilages forming large masses, and the mucous membrane covering them may be ulcerated. Sometimes ulcers are found on the true and false vocal cords, and by care, we can sometimes see the follicular structure of the posterior part of the trachea hypertrophied and ulcerated. Hemorrhage may at times occur, and there is often a copious purulent secretion.

We should always warn the patient against the slightest exposure, and when the least hoarseness occurs, we should treat it immediately, for by so doing we can often prevent the development of the later stages. In the early stages counter-irritation, by means of a blister, or by the repeated application of iodine, or of iodine and croton oil, and the direct application of astringents, as sulphate of zinc, grs. x–xl to the ounce, will often cut short the attack. If the attack is more marked, and we have not been able to cut it short, the larynx must be put to rest as much as possible, by inducing the patient to do without speaking, not even whispering, and to communicate everything by writing. My attention was called to the great importance of absolute rest in this form of laryngitis, by seeing the marvelous results that followed the operation of tracheotomy in cases of syphilitic laryngitis. The food should be unirritating, and great care should be taken that no particles get into the larynx. The patient should be careful that he does not take a fresh attack from chilling of the surface. Opium must be given, to allay irritability and cough. Counter-irritation must be steadily kept up. Topical applications must be used, to relieve the swelling and favor cicatrization of the ulcers.

Now as to topical applications. I think that in treating these cases the strength of the solutions used is often too great. We must remember that we have to deal with a not very highly vitalized tissue, and one which, when in a state of chronic inflammation, will not respond to strong applications. You will find that mild applications will do more good than strong ones. Solution of sulphate of zinc, or of the salts of iron, or of iodine,

will be found of service. Lately I have been using a solution of iodoform in ether or chloroform, varying in strength from grs. xv to the ounce up to a saturated solution, which is, I think, about ʒj to the ounce. This is a very unirritating application, and it certainly possesses very marked absorbifacient and alterative powers. Of course, each of these applications is to be made only to the diseased spots by the aid of the laryngoscope.

Inhalations are very valuable in the treatment of the laryngeal complication of phthisis. They may be used with the ordinary atomizer, which is a good method, but apt to excite coughing. In this way we may use nitrate of silver, tannic acid, sulphate of copper, sulphate of zinc, iodine, etc. We may use an inhaler made of a piece of rubber tubing, in which is placed a number of small rolls of bibulous paper. The solution to be inhaled is dropped in at one end, and then the patient uses it as an ordinary cigar. I have made a little alteration in this, by substituting for the rubber tube a glass tube with a constriction near one end, and for the paper, pumice stone, which makes it more cleanly. With this we may use a number of volatile solutions. In other cases we may employ a sort of mask made of two pieces of rubber, with sponge between them. By this means the patient may breathe medicated vapors for hours at a time. We may use with this tar, carbolic acid, iodine, etc.

We have now finished the discussion of the great complications of phthisis, and next week I shall ask your attention to the treatment of the pulmonary condition itself.

Communications.

A CASE OF OBSCURE DISEASE OF THE RECTUM.

BY REUBEN A. VANCE, M.D.,
Of Cincinnati, Ohio.

The following case, in which the phenomena of anal fissure were simulated by an ulcerated sacculus without the slightest external evidence of the existence of such a lesion, is offered as an illustration of certain of the more obscure forms of rectum disease:—

Early in February, 1880, I was consulted by a medical acquaintance of this city in reference to the case of his sister, who was then suffering from an obscure ailment of either the anus or the lower part of the rectum. The following are the more noteworthy points in the history of the case. In September, 1878, the young lady, then in her eighteenth year, paid a visit to some friends in Indiana, where she contracted intermittent fever. Although the chills were speedily controlled, still she did not regain her accustomed health. During October she began to suffer from a distressing itching of the anus, which was at first intermittent but finally became constant. She suffered so much from this itching of the fundament—the distress was so acute, and the tendency to relieve the intolerable irritation by scratching so great—that she was debarred all the festivities of the season, and compelled to forego many long anticipated pleasures. Between Christmas and New Year, 1878, she called attention to a marked enlargement of her right hypochondriac region. She remained constantly in her room, and could not be induced to take any out-door exercise. Alarmed at the impairment of her health, her brother advised a local examination, and urged her to express a preference for some surgeon, and commit herself to his care. She protested so strongly against the examination that all sorts of measures were resorted to for her relief, rather than again broach the topic she seemed to dread so much. In April, 1879, she complained of pain; she said that occasionally, instead of the itching, which, to a greater or less degree, was present all the time, she would have pain deep in the rectum. At first, the pain came on only after movement of the bowels; ultimately pain was added to the itching, and one or other was always present. The patient lost flesh and strength rapidly; she was sent East for change of air and scene. While in New York, in compliance with the earnest wish of her family, she consulted a well known surgeon. The rectum was thoroughly explored, the patient herself urging a careful search for the cause of her suffering. Finding nothing in the rectum or about the anus to account for the symptoms, this surgeon requested permission to make a vaginal inspection. To this the patient objected so strongly that no further exploration was then made. A few weeks subsequently her distress became unbearable, and she requested that another surgeon might be summoned and the lower bowel again examined. To this surgeon she wrote a note portraying her symptoms, in which she said that she was suffering from but two things; the first, a constant itching in and about the anus, and the second, a pain, not constantly but only occasionally present—an agonizing feeling of burning and stabbing following every movement of the bowels.

It was understood when the examination commenced, that the inspection was to be limited to the rectum and anus. The surgeon gave a

written report of his investigation, and said that both rectum and anus presented a perfectly healthy appearance; that in his judgment the pain and pruritus originated from "some reflex irritation" from the organs of generation. A course of medication was advised, and the patient remained East until late in the autumn of 1879. There was marked amendment during the last few months she was in New York, but as soon as she came home she began to suffer as before. Her general health now gave way, and when I saw her in February, 1880, she looked like one in the last stage of pulmonary consumption.

When first consulted I was told the great repugnance the young lady had to a vaginal examination, but that she had finally consented to submit to any measure her advisers thought necessary. February 9th, I called at her residence for the purpose of making an examination. The integumentary folds radiating from the anal aperture were congested, thickened and œdematous, doubtless as the consequence of constant scratching, but there was no trace of anything like an anal fissure at any point within the anal canal. The lining membrane of the rectum was searched with the utmost care, but no lesion of any sort was revealed. In short, no evidence of anything more than the irritation caused by the scratching could be found at any point. It is true that there was more or less hypertrophy of the anal sphincters, but that could arise as well from a reflected irritation as a direct lesion of the part. A second painstaking review of every tissue and part of the rectum and anus convinced me of the facts just detailed, and I was upon the point of abandoning all hopes of finding a local lesion, when, as a matter of form—for there were no evidences of disease about them—I determined to pass a probe into each one of the little sacculi of the anus. My probe could not be forced into the first one; with the second one I fared no better; but with the third one, after an ineffectual attempt, the probe passed into the sacculus. No sooner did the probe effect an entrance, however, than the patient screamed with pain, there was a spasmodic retraction of the levator ani and sphincter muscles, and the part I was examining was forcibly withdrawn from view. The spasm of the pelvic and anal muscles was so great, and the patient's suffering so intense, that I was compelled to postpone further investigation for a short time. Later in the day I found the anal sphincters so irritable, that I deemed it advisable to postpone the inspection for forty-eight hours. During the ensuing two days the patient was confined to her room. February 11th, the examination was renewed. Finding the sphincters so firmly contracted that a view of the diseased sacculus was impossible, I proposed the use of an anæsthetic and mechanical distention of these muscles. The patient promptly consented to the latter, but refused the anæsthetic. She was placed on the left side, with her thighs flexed upon the body, her knees being brought as closely as possible to her chest, and her hips resting on the edge of the bed; in this position it was no severe task for the operator to insert first one forefinger and then the other within the anal canal, and slowly distend the contracted sphincters. So soon as partial atony was produced, the forefingers were withdrawn and the thumbs inserted; the anal canal was then distended to the utmost, pressure being made successively in different directions until every part of the rectum outlet had been thoroughly stretched. It is worthy of note that no great amount of pain is produced when this part is slowly distended, even if the force applied be great enough to produce complete atony. When the thumbs were withdrawn the mucous lining of the rectum protruded to such an extent that the whole of the columns of Morgagni were exposed. A careful search was then made for diseased sacculi; but one, however, appeared enlarged. The probe, properly curved, was used between the various columns; in but the one instance could a canal leading to a diseased sacculus be found. In this one—the sacculus into which the probe had been forced the day the examination was begun—the site of the sacculus felt as if a buck-shot were embedded in the tissues, so hard and swollen was the part. A small probe-pointed tenotome was carefully forced along the canal, and as soon as the sensitive point was touched the handle was brought down and the edge of the knife made to sever the inner wall of the sacculus and expose the diseased point. This done, the cause of the young lady's suffering was revealed. Here, on the left side of the anus, and at a point where there had been no unusual sensibility, an indurated ulcer had formed within one of the little sacculi between the columns of Morgagni. When the sacculus was opened and the ulcer exposed it seemed very much like an ordinary fissure of the anus, but before cutting open the sacculus there was no evidence whatever, save the symptoms the patient complained of, to indicate the existence of such a lesion. A drop of fuming nitric acid was applied to the

very centre of the exposed ulcer; almost immediately the part was flooded with a solution of carbonate of potash. The acid was so quickly followed by the alkali that the patient suffered no pain from the procedure. Upon taking leave of the patient I assured her she would have no further need for my services—that she would at once get well.

February 14th, I was informed she was suffering from severe pain in the abdomen; on the 15th I was hastily recalled. She told me that ever since the operation she had suffered colicky pains and had a bilious discharge, almost all fluid, but that all morning something like the old pain had returned. A digital exploration revealed a mass of hardened fecal matter, too large to pass through the anus, distending the lower part of the rectum. This finally yielded sufficiently to the attacks made on it to pass through the anal ring; an immense quantity of very offensive fluid fæces followed; and the patient fell asleep as soon as she could be returned to her bed. The next day her exhaustion was really alarming, but ultimately she rallied, her strength gradually returned, and at present she is in perfect health.

In this case there are several interesting points: The pathognomonic symptoms of anal fissure present themselves in an individual pronounced to be free from any lesion of the terminal portion of the large intestine, or anal orifice. Again: fecal impaction seems to have developed under the very eyes of the patient's surgical advisers, not one of whom—myself among the number—gave that contingency a moment's consideration. It was simply owing to the fact that the last surgeon gave attention to the always obscure and generally insignificant anal sacculi, "as a matter of form," that he stumbled upon the lesion causing the patient's sufferings, and was enabled to effect a cure. Had he not, in a mere spirit of routine, determined to probe the sacculi intervening between adjacent columns of Morgagni, he would have given the patient no more assistance than his predecessors. Like the latter, and more culpably than they, he paid no attention to the young lady's complaints of an enlargement in one side; the only excuse he has to offer is that at first his examination was interrupted just as he arrived at the critical point of the case, and the next time he worked so long in stretching the sphincters and in atonying the muscular tissue at the lower end of the rectum, and was so tired by the time he had cauterized the exposed fissure, that he temporarily forgot to inquire about the matter. When next he saw the patient the fecal mass had been removed to the rectum, and was in a position to be destroyed by mechanical means.

The whole history is an interesting commentary on, and illustration of, obscure affection of the rectum and anus. Symptoms of rectum disease succeed intermittent fever, and last for seventeen months during which the unfortunate patient suffers untold agony, and fruitlessly seeks relief far and near. While all the phenomena developed point unmistakably toward fissure of the anus, or irritable ulcer of the rectum, yet it is impossible for the surgeons in whose care she is placed to find any such lesion. Ultimately a probe is by chance brought in contact with an ulcer, which has developed deep in one of the little sacculi between the columns of Morgagni; as a consequence the surrounding tissues become swollen and thickened, and the ultimate discovery of the lesion causing the patient's agony is assured. It seems that the straight fibres of the external, or longitudinal layer of the muscular substance of the rectum curves around the thickened lower border of the internal or circular layer, and is gathered together into columns before proceeding upward to be attached to the fibrous substratum of the loose cellular tissue beneath the mucous membrane of the lower fourth of the rectum. In this way are formed the pillar-like projections at the end of the rectum, over which the mucous lining is reflected, constituting the columns of Morgagni. In number, they vary from nine to thirteen—occasionally, but from four to seven are present. If the mucous folds between adjacent columns be investigated they will be found to end inferiorly in lacunæ which are located immediately below the lower margin of the internal sphincter. At this point membranous folds of a semilunar form can be seen, the number of which will correspond with that of the grooves themselves, which convert the depressions between the columns of Morgagni into lacunæ that are from two to ten lines in depth. The mouths of these little pit-like cavities are on the same level, and in health their orifices can be easily traced around the anus. These little sacculi, which naturally contain a mucus that is discharged when the anus is distended, may become diseased in different ways. That as painful an affection as fissure of the anus may result from an ulceration within a sacculus which presents no evidence of its situation until a probe is inserted, the foregoing case amply illustrates.

I need not dwell upon the importance of a careful study of the state of these little sac-

culi, in cases in which the rectum is the site of painful symptoms without there being any apparent morbid anatomical changes sufficient to account for them; nor insist upon the fact that the surgeon is never prepared to pronounce upon the condition of the terminal portion of the large intestine until these little sacculi have been examined.

PARTIAL FRACTURE OF BOTH BONES OF THE FOREARM NEAR THE WRIST JOINT, AND SEPARATION OF THE DISTAL EPIPHYSIS OF THE HUMERUS, FROM A FALL ON THE PALM OF THE HAND.

BY J. S. WIGHT, M.D.,

Professor of Surgery at the Long Island College Hospital.

Reported for the MEDICAL AND SURGICAL REPORTER.

On the 23d of June, 1880, Joseph Hartwell, eight years of age, fell from a cart and struck on the palm of his right hand. That the palm of his right hand came against the pavement could not be doubted, because it was contused near the base of the radius, having the dirt of the street driven into the integument. The patient was suffering great pain, and was holding his right forearm in his left hand, as his older brother came with him into my office. An examination showed the following points, namely: 1. Both bones of the forearm were broken near the wrist joint, the hand being carried backward. 2. The lower end of the humerus was completely broken off, the forearm with the fragment being carried backward and outward.

The following observations were made in regard to the first point:—

1. The fragments of both radius and ulna were about five-eighths of an inch in length.

2. These fragments met the upper fragments at an angle of about forty-five degrees, having been bent backward from their normal line with the long axis of the bones of the forearm.

3. They did not deviate either outward or inward.

4. The carpus could be felt under the flexor and extensor tendons and in the concave floor of the base of the radius, very readily.

5. The patient could not move the hand on the injured side. The surgeon could move the hand on the injured side in every normal way, but to a limited extent.

6. There was no rotary displacement of the distal fragments and the hand. In fractures of the base of the radius the hand and distal radial fragment are rotated outward.

7. The fractures in both bones were "green sticks," and the distal fragments were firmly fixed in their new position.

8. Reduction was made by taking hold of the lower end of the upper fragments with my left hand and resting that hand on my knee, and by taking hold of the lower fragments and the hand with my right hand, *and then bending the fragments back into place, as nearly as possible. This required very great force.*

9. The reduction was not quite perfect. The lower fragments bent very slightly backward, and tended somewhat outward. This outward tendency was partly overcome by the splints that were applied.

10. *From the beginning to the end of the examination and the reduction there was not the least sign of crepitus.*

The following observations were then made in regard to the second point:—

1. The fracture of the humerus appeared to be a *diastasis.* The lower fragment was short, and was carried backward and outward with the bones of the forearm; and the distal end of the upper fragment had a rough and irregular outline that could be felt in front, as it projected under the skin and subtegumentary tissues.

2. The displacement of the epiphysis of the humerus, and the forearm backward was about one inch, outward about three-fourths of an inch.

3. The forearm was about semi-flexed on the arm, and was in a state of mid-rotation. The forearm could not be moved by volition. There was mobility of the forearm and the humeral fragment in the hands of the surgeon.

4. There was a hematocele in the flexure of the limb over the elbow joint, from a rupture of one of the cutaneous veins.

5. The reduction of the fragments of the humerus was made by the ordinary manipulations for reducing a dislocation of the forearm. The lower fragment went into place without much difficulty, and was readily kept in place.

6. During this reduction there was no bony crepitus. There was a rough "rubbing feel.

After the reductions of the displacements of the forearm and the arm were made, two double-angled splints cut from wire-cloth were applied, one on the outside and one on the inside of the injured upper limb. Thereupon the little patient experienced a sense of relief and comfort.

In regard to this case the following remarks may now be made, namely:—

1. Under the circumstances of the injury, in a

patient eight years of age, we might have expected (1) a fracture of the base of the radius; or (2) a dislocation of the forearm; or (3) a fracture of one of the condyles of the humerus; or (4) a supra-condyloid fracture of the humerus; or (5) a fracture of the base of the radius complicated by a dislocation of the carpus backward.

2. The injury was caused by a fall on the palm of the hand. The energy of the falling body met with the resistance of the pavement. The fractures were caused by the bones being caught between two counter forces.

3. It does not seem probable that either fracture was produced before the other; as the bones were firm bodies, the reaction would be transmitted to the elbow quite as soon as to the wrist; and the interval of time in this respect would be so small, that we can say that both fractures were produced at the same instant.

4. The inference would be that the bones of the forearm were stronger than the humerus, because the humerus gave way entirely, while the bones of the forearm were only partially broken.

5. The radius appeared to have suffered most, because after the reduction of the bent bones of the forearm, the fracture of the radius was more nearly complete than the fracture of the ulna.

6. In all my experience I have never before seen a case like this—so much injury and of so exceptional a kind, caused by a fall of so little severity.

Passive motion was made on the third day, and continued at frequent intervals for some weeks. The function of the hand was well restored; the rotation of the forearm was not quite so good as normal; while the function of the elbow joint was somewhat impaired. A good deal of bony enlargement united the fragments of the humerus. The case made a better recovery than I have sometimes seen, when only one condyle of the humerus has been broken off. The good result was in part due to early passive motion.

American Dental Association.

At the session of the American Dental Association, held in Boston, the report on Section 2, on dental education, urged that the Association should fix a standard of preliminary education to be required by dental colleges. The question whether dentistry was a specialty of medical science or not was considered. Dr. Brophy urged the necessity of dentists having a thorough medical education and a complete knowledge of dental surgery. The Association voted to hold its next annual meeting in New York City.

Hospital Reports.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

CLINIC OF JOHN ASHHURST, JR., M.D.,

Professor of Clinical Surgery in the University of Pennsylvania.

REPORTED BY CHAS. W. DULLES, M.D.,

Surgical Registrar to the University Hospital.

Tracheal Fistula, with Stenosis, the Result of a Suicidal Wound—Operation—Recovery.

GENTLEMEN:—The patient whom I show you to-day has an injury of a very unusual and interesting character. Some months ago—the physician who sent him here does not state in his note how many—he made an attempt at suicide, by cutting his throat. This attempt, however, failed, and he recovered from the immediate effects of his wound. But, unfortunately, this, which communicated with the trachea, never entirely healed, and in the process of repair has undergone such cicatricial contraction as has brought about a marked narrowing of the calibre of the windpipe. This has gone so far as to make the man's respiration very labored, and, indeed, to indirectly imperil his life. The man cannot speak at all, and you observe how hurried is his respiration.

This is, therefore, a very urgent case, and we must see what we can do for our patient's relief. Cases of the kind are very rare, and, until the trachea is opened and a tube inserted, so as to relieve the dyspnœa and an exploration made of the parts above the suicidal wound, we cannot say certainly what can be done. The patient is anxious that our operation shall go further than simple tracheotomy, so that the occluded tube may be restored to its functional activity.

Mr. Henry Lee, of St. George's Hospital, London, had a case where he succeeded in accomplishing this: he first did a tracheotomy, and afterward, by successive dissections upward, removed parts of the cartilages which seemed to have overlapped and united thus faultily; he then used a tracheal tube, somewhat T-shaped, so that the air could pass either through the throat or the neck, as should be determined, by setting a valve in the tube. Dr. Cohen, of this city, has designed a somewhat similar tube, with a ball valve, which regulates the respirations very efficiently.

In operating upon our patient I will do tracheotomy first, so that I may avoid having blood flow back into the trachea when I come to the operation above. I shall also use as large a tracheal tube as possible, so that it may help, by pressure, to control any hemorrhage which may come from the sides of the wound and block off any blood which may find its way down from above.

You see that we cannot etherize this patient in the customary way. The towel will have to be held over the contracted opening, through which the air goes whistling in and out, and if, during the operation, we find the ether acting badly, or the towel in the way, we shall just have

to desist from the anæsthesia till we can regulate it properly.

You will observe how carefully I dissect through the tissues which overlie the trachea. I do not prolong the suicidal wound downward, but keep entirely below it, for I do not wish to have any communication with the trachea till I have controlled whatever hemorrhage may occur. It would not do to have blood trickling in here while I do the necessary dissecting. When I come upon the white rings of the trachea I hook it up with a tenaculum, and entering a small scalpel below, cut upward through several rings. In this part of tracheotomy you must always turn the edge of your knife upward, so as to avoid running the risk of cutting the important structures which lie close to the supra-sternal fossa. For it has even happened that the innominate artery or vein has been accidentally opened; of course, with a fatal result.

In inserting the tracheal tube the trachea is steadied with a blunt hook. Immediately there is a rush of air through this new passage, driving before it some little blood and mucus. You will observe, too, the effect of a freer canal; the respirations diminish in frequency, and lose the anxious character they had before the operation, and before the patient was anæsthetized.

You will also observe how the presence of the tube in the trachea excites efforts at coughing, which are of a peculiarly asthmatic character, and dependent upon the spasmodic reflex contraction of the respiratory muscles. These efforts become less marked as the anæsthetic is renewed and lulls the local and general sensibility.

I have now explored the tube above the self-inflicted wound, and find I can pass a flexible catheter up through the larynx. As I do this, see how the foreign body in this apparatus excites coughing.

I find here that the lumen of the trachea, just at the level of the cricoid and lower part of the thyroid cartilages, is almost entirely occluded. I shall now dissect back the dense cicatricial tissue which is making tension upon the tube, and then with strong scissors remove enough of the displaced cartilages to make a better and fuller opening through them.

(*Note.*—From this point the operator proceeded until he had cleared a passage through the larynx and could pass a tube up into the mouth. This was subsequently kept open by using the solid stem of a tracheotomy tube as a bougie.

The patient gradually recovered the use of his voice, and was dismissed from the hospital three months later with free respiration through the tracheotomy tube, and the ability to talk quite audibly, though in a hoarse and whispering voice.—Rep.)

Editorial Department.

Periscope.

Case of Labor with Albuminuria.

Dr. Stanley Haynes, of Malvern, reports the following case in the *Lancet*, July 10th, 1880:—

On July 24th, 1878, at 10.30 P.M., without having any previous knowledge of the patient, I was called to attend Mrs. P., a gardener's wife, a primipara, aged twenty-six. A nurse had arrived just before I was sent for (about half an hour previous to my attendance), and been so alarmed by the condition of the patient that she had immediately given a glass of hot brandy and water, and said that a doctor must be obtained directly. On my arrival the patient looked as if she had had serious hemorrhage, but there had not been any. The face had a deadly pallor, the nostrils were contracted, the eyelids half closed and twitching, the breath was cold and breathing slow and superficial, and there was a cold perspiration on the forehead; the pulse was barely perceptible, and slow. The patient was calm and sensible, said she felt very well, and was quite unaware of there being anything unusual. She calculated she had gone between seven and eight months. There had not been any convulsions. Labor had begun about 4 P.M., with ordinary prodromata, and pains had not become regular or frequent until about 7 or 8 o'clock, when the liquor amnii, in apparently small quantity, escaped, and the patient had continued about her household vocations until then. There was no vomiting. The patient had not complained of illness or debility. (Neighbors subsequently stated she had been very pale during her pregnancy.)

On examination there was not, and had not been, any hemorrhage; the external genitals, the thighs, legs, feet, and arms felt cold, like those of a corpse, and the ankles were œdematous. The abdomen could not be termed warm. The warmest part of the body was the thorax, and that was of low temperature. I had not taken a thermometer. The os uteri was of the size of a shilling, dilatable; the presentation was left occipital anterior, and the pains came on about every ten minutes, were slight, and appeared to be almost unknown to the patient. Brandy and water was repeated in frequent small doses, with one drop doses of landanum, and heat applied to the feet, calves, thighs and abdomen, producing warmth where applied, but very little improvement to the circulation or respiration. The pains gradually became more frequent and the os slowly enlarged. At about 2 A.M., as the general state of the patient continued as described, I sent for my friend, Dr. Thelwall Pike, in consultation. On his arrival, about three o'clock, he approved of the treatment so far, agreed it would be better to watch and wait carefully unless there should seem reasons for expediting the labor, and regarded the case with anxiety. Soon after he left the

pains became stronger, the labor advanced rapidly, the patient remaining cheerful and suffering very little even during strong expulsive efforts, and a recently dead female child was born. After a short interval pains recurred, and the placenta came away with very little, and that pale, hemorrhage. The patient expressed herself as very comfortable and soon became warmer, and I left her doing well at about 8 A.M. She made a good and rapid recovery, and seemed surprised I had been anxious about her.

When the lochia had ceased the urine became almost solid on boiling; it did not contain any casts or crystals. There was marked leucocythæmia. Under chalybeates and potassic chlorate she speedily improved, and assumed a natural appearance, and the albuminuria steadily diminished and ceased. On September 8d (six weeks after parturition) she was so far recovered she did not wish for further attendance. I advised recourse to the treatment in the event of relapse or of pregnancy.

On March 31st, 1879, eight months after confinement, I was asked to see her again, and found leucocythæmia and albuminuria, and prescribed iron and potash as before. She took this for a month only and recovered. In August she had a living child at full time, after a natural labor, and without the attendance of a medical man. Since then she has continued well.

Diseases of the Eye Occurring in Connection with Pregnancy.

Mr. Henry Power contributes an important series of articles on diseases of the eye in connection with pregnancy, to the *Lancet*, May 8th, 15th, 29th, 1880. He commences by reviewing the physiological changes induced by pregnancy, and concludes that the quantity of blood, though increased absolutely, is not relatively, and that in pregnancy a condition of general anæmia is far more commonly met with than one of hyperæmia. From an examination of the various cases which have fallen under his notice, he would classify the diseases of the eye in connection with pregnancy under three heads, namely: 1. Affections depending on general anæmia and exhaustion; 2. Those consequent on some special lesion of the nervous system; 3. Those depending upon, or rather associated with, albuminuria. Among diseases attributable to exhaustion, the most common are ulcers of the cornea, which may be either spontaneous or arise from some slight injury. They are often central, are slow in their progress, and are not usually dangerous. The treatment may be summed up in two words, rest and tonics. The former indication may be fulfilled by a two or four-grain solution of atropine or eserine, and the application of a pad of cotton-wool and a bandage; the latter by quinine. During lactation, a more dangerous form of ulcer is often met with, causing destruction of the cornea, with eventually atrophy of the globe. Paracentesis corneæ is often required in such cases. Another sign of exhaustion in pregnancy is impairment of the power of accommodation, due to enfeebled action of the ciliary muscle. Glasses, in suitable cases, will necessarily be required, but much good also may be effected by tonics, especially strychnia in small doses. As regards special lesions, the author has witnessed what he considers an increased tendency to lachrymal abscess, and to the development of cataract. Lesions of the nervous system, or lesions implicating the nervous apparatus of the eye generally, he divides into two groups, the intra- and the extra-ocular. The former affect the retina, the latter the optic nerves, chiasma, optic tract, and central ganglia. The retinal affections are almost limited to cases of albuminuria, though, also, cases of hemorrhagic glaucoma, and miliary hemorrhages unconnected with albuminuria in pregnancy have been noted by Galezowski. Two cases are recorded by the author, in which retinal hemorrhages during pregnancy passed off harmlessly, and one in which they were of fatal significance. As regards the treatment of such cases, it is the same as that of retinal disease generally, no special treatment being demanded for the eyes. Some writers have recommended the induction of premature labor in these cases, but the author considers more data are required before a positive opinion can be pronounced, more especially as to the period when labor could best be induced. As regards intracranial diseases in pregnancy, the author suggests they could almost be classed under the head of 'anomalous affections.' He gives the histories of cases of partial or complete loss of vision from post-partum hemorrhage, and explains such either by abolition of the circulation in some portion of the cerebrum, or by some lesion of the delicate tissue of the central nervous system from sudden diminution of pressure. Many such cases eventually resolve themselves into atrophy of the optic disc. A comparison between this condition and the occurrence of chorea in pregnancy may perhaps be instituted.

Influence of Tobacco Smoking Upon Health.

In the *Revue d' Hygiène* for November 15th, 1879, Dr. Decaisne observes that the excessive use of tobacco causes in some subjects intermission of the beats of the heart and radial artery. Out of eighty-eight smokers who came under his observation during a period of three years, he found twenty-one cases of intermittent pulse, without any organic lesion of the heart. He states—

1st. That none of the subjects who came under his observation had organic disease of the heart.

2d. That none of them were in a state of health favorable to the development of intermittence in the beats of the heart.

3d. That in nine cases the complete abstention from smoking tobacco was sufficient to restore the cardiac rhythm and the system to their normal condition.

He therefore says that the abuse of tobacco produces in some subjects a condition which he terms *nicotism* of the heart, which is manifested by intermissions in the beats of that organ, and in the pulsation of the radial artery. It is sufficient in some cases to suppress or diminish the use of tobacco in order to stop or diminish the irregularity in the heart's action.

Dr. Delaunay, in commenting upon Dr. Descaisne's paper in the *Revue d' Hygiène* for Janu-

ary 15th, 1880, calls attention to the influence of the emanations from tobacco upon pregnancy. In a poor district of Paris there is a manufactory of tobacco in which 2000 women are employed. According to the evidence of a midwife who has attended a great number of women employed in this factory during their confinements, they are peculiarly liable to miscarriages, which they attribute to the influence of the exhalations from the tobacco. Some of the women, who are not altogether dependent upon their earnings from the factory, leave it when they become pregnant until after their confinement. One woman who had twice miscarried while working at the factory, left it when she was in the fifth month of her third pregnancy. Her child was born alive at the proper time, but died soon after its birth. The mother did not return to the tobacco factory, and her fourth pregnancy terminated in the birth of a healthy child, who survived. During her first three pregnancies she suffered much from obstinate vomiting—due, perhaps, to the action of the tobacco.

From these and similar data Dr. Delaunay deduces the following conclusions:—

1st. Tobacco has a pernicious influence upon the health of children and mothers.

2d. It impairs the health of pregnant women, and causes miscarriage.

3d. It has the same noxious effect upon children weak from their birth.

4th. It diminishes the quantity of milk and alters its quality for the worse, and, consequently, prevents the proper growth of the child, who, indeed, often dies, a victim to his mother's occupation.

Acute Eczema of the Face, Following Neuralgia.

Dr. John Cavafy, F.R.C.P., assistant Physician to St. George's Hospital, reports the following case in the *British Medical Journal*, July 24th, 1880:—

Charles F., aged 38, pastry-cook, applied as an out-patient on February 13th, 1880, stating that for five days he had suffered from severe pain in the left side of the head and face. The pain extended over the orbit, cheek, and lower jaw, and also to some extent over and behind the ear. On the scalp and down the neck numerous tender spots were found, the most marked being over the eyebrow and just behind the ear. He declares that the pain was at times maddening, but regularly intermitted about 6 o'clock in the evening, to begin again on the following morning after he had risen. The left conjunctiva was slightly injected, and there was some lachrymation of the left eye, but the skin itself was not reddened or swollen, and appeared normal in every respect. There were no carious teeth, nor was the pain more severe along the course of the dental nerves.

As the neuralgia intermitted so distinctly, he was given quinine, of which he took nine grains daily for four days, without the least benefit. The pain continued as before, and was worse than ever on February 17th, on the evening of which day it subsided as usual. On the following morning the whole left side of the face was found to be much swollen, and from that time there was no return of the neuralgia. The swelling of the face, however, continued to increase, and on February 20th, when he was seen again, there was acute eczema affecting the parts which had previously been the seat of pain. The whole left side of the face was red and extremely œdematous, the eyelids especially being enormously swollen, so as to quite close the eye, the left ear was red and swollen, as was also the neck in its neighborhood, and the whole affected parts were streaming with a transparent discharge from innumerable small vesicles. At the margin of the scalp and beard there were a few yellowish gummy crusts. The swollen skin was not sharply circumscribed, but gradually shaded off into healthy texture, the demarcation being obscurely marked by numerous bright-red papules. There was no pain beyond a sensation of burning and smarting, and the eczema yielded to purely local treatment, no neuralgia taking place after its subsidence.

Although a variety of erythematous and vesicular skin eruptions have been noticed to occur occasionally after neuralgia (more especially herpes zoster), yet an acute dripping eczema is a sufficiently rare sequel to merit a short record. The case, moreover, is not without interest from the point of view of diagnosis, as the swollen face and closed œdematous eyelids had a strong superficial resemblance to erysipelas. On looking a little more closely, however, the various points of difference became evident; these being a less angry redness, the absence of a sharp line of demarcation, and the presence of numerous bright red points (papules) beyond the swollen skin. The most valuable diagnostic points, however, were to be found in the general condition of the patient; there had been no antecedent rigors or vomiting, there was no general malaise, and above all, no fever, the temperature being barely above the normal; whereas, in erysipelas, it would have been three or four degrees higher, at least.

Stigmata of Maize in Urinary Complaints.

Dr. Dupont of Buenos Ayres, communicates to the *Revista Medico Quirurgica* some interesting facts in relation to the therapeutic value of the above vegetable product, from which we transfer his ultimate conclusions, which are the following:—

1st. The stigmata of maize have a most evident action, I do not say always favorable, nor in all the affections of the bladder, whether recent or chronic.

2d. In acute cystitis from traumatism, as well as in blenorrhagic cystitis, they produce a very pronounced diuretic effect, with exacerbation of the pains. It is, therefore, preferable in these cases to abstain from their employment.

3d. It is in *gravel*, uric or phosphatic, and in chronic cystitis consecutive to gravel, and in mucous or muco-purulent catarrh, that the best results are obtained. All the disagreeable symptoms disappear rapidly—the vesical pains, dysuria, excretion of sand particles, ammoniacal odor, and the abundant secretions, etc.

4th. Retention of urine disappears under the amelioration of those symptoms; but the em-

ployment of the catheter ought occasionally to be continued, should the bladder not completely empty itself.

5th. Several of the patients observed had used the customary remedies—as turpentine, tar, mineral waters, etc. The stigmata of maize have produced good results when the means previously used had not benefited.

It may be useful in certain cases to employ at the same time with the stigmata the external measures indicated by the pathology—as vesical irrigations with much water, by the double current catheter; also injections of solutions of tar, borax, silicate of soda; those of bicarbonate of soda if the urine be acid, or those of benzoic acid if it is very alkaline.

6th. Besides their effects in bladder affections, the stigmata produce the best results as a diuretic, entirely harmless, though very energetic in heart affections, albuminuria, and in general in all cases in which ordinary diuretics are indicated. We have known numerous cases in which the urinary secretion has trebled or quintupled in the first twenty-four hours, and others in which the medicine had been continued two and three months without any untoward result. It is to be stated that the diuretics most in use, as nitrate of potassa, digitalis, squills, etc., are not always convenient, or without risk.

Urethral Chancroid; Cicatricial Stricture.

The following case is reported in the Buffalo *Medical and Surgical Journal*, for August, 1880, by Henry P. Cooke, M.D., Assistant Surgeon U. S. Marine Hospital Service:—

F., seaman, aged twenty-seven years, placed under treatment January 9th, 1880, for chancroid of penis, and a discharge from the urethra. On examination a small lump was found in the urethra abut 1¾ inches from the meatus, and it was believed that the discharge arose from a chancroid located at this point within the canal. January 24th patient complained of symptoms of stricture of the urethra, which was found to be located in the seat of the chancroid above described. The chancroid having healed, treatment for the stricture was instituted by the method of gradual dilatation, which was continued until a No. 6 sound could be passed. Beyond this point the use of the sound produced no effect, and another chancroid appearing on the glans penis, treatment was suspended until it should have healed. From the latter part of February to April 20th, patient was lost sight of. At the latter date he again appeared with the chancroid still existing, it having assumed the serpiginous type, and for this he was treated until June 27th, when it finally healed. Examination now showed a tight stricture, through which it was impossible to introduce a No. 1 catheter. By the use of a filiform bougie, small silver probes, and finally a catheter, dilatation was carried to the extent of admitting a No. 1 steel sound, and from this it was gradually extended until No. 3 could be introduced. Beyond this it was found impossible to proceed, and divulsion, with Thompson's instrument, was attempted, patient being under the influence of ether. The instrument was turned until the index marked about No. 4, when with a sudden snap it broke, the shoulder against which the point of the lever rests having been pried from its bed in the groove of the shaft. Subsequent to this, two separate attempts were made, with the same results, although the instrument was repaired very thoroughly after each accident. As the stricture was too tight to admit Maisonneuve's urethrotome, it was decided to attempt to incise it from within, with an ordinary tenotome; and to this end the patient was etherized, a grooved director introduced, and a long-bladed tenotome made to follow the groove until the stricture was reached. With the knife inserted up to the shoulder of the handle, the stricture could be touched with only a small part of the cutting edge, and with this it was nicked until a No. 4 sound could be passed. Maisonneuve's instrument was now introduced, and the blades separated until the index marked 40, when the knife of the instrument was drawn through the stricture, and the urethrotome removed. A No. 12 sound was immediately passed, and the treatment by dilatation commenced. The resistance of the stricture was shown by the fact that the lower blade of the urethrotome, a powerful instrument, was bent several lines out of position; and when the knife passed through the stricture the sound was that produced by cutting hard-rubber cartilage.

Congenital Atresia of the Vagina.

The following case, under the care of Mr. R. T. Leeming, is reported in the *Lancet*, July 3, 1880:—

M. A., aged nineteen years, married eighteen months, was admitted on January 16th, 1879. She had never menstruated, but suffered from pains in the back and around the abdomen for several years.

On examination a hard tumor larger than a fœtal head was found in the abdomen immediately above the pubes, and instead of a vagina there was a large rounded protrusion, covered with mucous membrane, tightly stretching the vulva. Examination per rectum proved that the abdominal tumor and vaginal protuberance were one.

An opening of three-quarters of an inch was made in the centre of the vaginal protuberance, and the confined menstrual discharge came away in the form of a very thick treacly fluid, to the extent of over two quarts. The parts were covered well with carbolic oil. Two days later the incision was extended toward the meatus urinarius and perineum. On digital examination there was a perfect vagina and os uteri. A tent of carbolic tow was introduced, and external antiseptic dressings were used. The patient had a restless night, and on removing the dressing next morning about half a pint of albuminoid leucorrhœal discharge escaped. There were no symptoms of constitutional disturbance until the second night after the operation, when the patient had several rigors. At 10 A.M. temperature was 103° F. On the dressing being removed a quantity of fetid pus, but of a laudable color, escaped. On examination with the speculum this discharge was seen welling from the uterus, the os being dilated to the size of a threepenny piece, the parts being

swollen. The vagina also participated in the general inflammatory action. The glands in both groins were enlarged and very tender on pressure. Instead of the ordinary dressing a speculum was now introduced and fixed, filled tightly with carbolic tow, so that the discharge might escape. Five grains of quinine, with ten drops of sedative solution of opium, were administered every four hours.

The inflammatory fever lasted for four days, the temperature, mornings and evenings, varying from 100° to 102.° The secretion now became of an albuminoid nature, which soon ceased with a subsidence of the irritative fever and swelling of the inguinal glands.

Before leaving the hospital, about three weeks after the operation, a normal menstrual flow took place.

The case was entirely lost sight of until April 29th, this year, when on a journey into the country Mr. Leeming met her medical attendant, who informed him that the patient had been delivered of a full-grown female child, after a natural labor, three days previously. Mr. Leeming visited her, when her expression of countenance, instead of being dull and half idiotic, as previous to the operation, was bright and intelligent, and she said that after she left the hospital she was quite a different woman, and had never been so well.

Reviews and Book Notices.

NOTES ON CURRENT MEDICAL LITERATURE.

——Dr. J. L. Gerhart, of Hot Springs, Arkansas, sends us, in the form of a reprint from the St. Louis *Medical and Surgical Journal*, June 20th, 1880, a paper on "The Therapy of the Waters of the Hot Springs, and their Relation to the Medical Profession at Large."

——We have received, in a reprint from the *Journal of Nervous and Mental Disease*, for April, 1880, a paper on "The Coincidence of Optic Neuritis and Subacute Transverse Myelitis," which was read before the New York Neurological Society, March 2d, 1880, by E. C. Seguin, M.D.

——"Physicians and their Patients," is the subject of a lecture delivered at the formation of the Douglas County Medical Institute, April 22d, 1880, by C. H. Merrick, M.D., which has been sent to us in pamphlet form, and in which the lecturer discusses their true relation in a very able manner.

——We have received the prospectus of the *Rocky Mountain Medical Review*, a new medical journal, to be published monthly, at Colorado Springs, Colorado, the first number to appear in September next. It will be edited by A. Wellington Adams, M. D., assisted by several other gentlemen. Subscription Five Dollars per annum, in advance. We wish the enterprise success.

——"The Ship Origin of Yellow Fever, with Comments on the Preliminary Report of the Havana Yellow Fever Commission," and "Practical Hints Relating to Yellow Fever Prevention," are the respective titles of two pamphlets by Robert B. S. Hargis, M. D., of Pensacola, Florida, sent us, the one in a reprint from *Gaillard's Journal*, for June, the other from the *Independent Practitioner*, for July, 1880.

——*The North American Review*, for August, contains the following interesting articles:—"Ruined Cities of Central America," by the editor; "The Law of Newspaper Libel," by John Proffatt; "Nullity of the Emancipation Edict," by Richard H. Dana; "The Census Laws," by Charles F. Johnson; "Principles of Taxation," by Professor Simon Newcomb; "Prince Bismarck, as a Friend of America, and as a Statesman"—Part II, by Mortz Busch; "Recent Literature," by Charles T. Congdon.

BOOK NOTICES.

Transactions of the Medical and Chirurgical Faculty of the State of Maryland. Eighty-second Annual Session, held at Baltimore, Md., April, 1880. pp. 213.

The inaugural address, by the President, Professor S. C. Chew, A.M., M.D., was on the subject of "Medicine, in the Past and in the Future." Prof. John W. Mallet, M.D., of the University of Virginia, delivered an address on the "Claims of Science, for its Own Sake, upon the Medical Profession." The following are among the papers read: "The Use of the Sphygmograph in Practice," by Abram B. Arnold, M.D.; "A Novel Case of Hemorrhage During Labor," by P. C. Williams, M.D.; "Report on Sanitary Science," by James A. Stewart, M.D.; "What Can be Done for our Imbeciles," by J. D. Thomson, M.D.; "Optico-ciliary Neurotomy," by Julian J. Chisolm, M.D.; "On the Extraction of Cataract Within the Capsule"—based on 200 operations after this method—by George Reuling, M.D.; "Clonic Spasm of the Muscles of the Arm and Trunk," by Randolph Winslow, A.M., M.D.; "The Use of Caustics in Dermatological Practice, with Special Reference to the Treatment of New Growths," by I. Edmondson Atkinson, M.D.; "Diagnosis of Malignant Tumor of the Upper Jaw in Youth," by L. McLane Tiffany, M.D. A list of the members is also appended.

THE

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THE REGISTRATION OF DISEASE.

From time to time we have referred to the growing recognition of the fact that mortality tables are no fair gauges of the healthfulness of a given period of time or community. There are numerous diseases which prevail very extensively at times, or are of an obstinate character and persistent duration, which, however, are attended with very little fatality. Mumps, measles and varicella are examples of the former; the lighter forms of malarial fever, skin diseases, nervous diseases, and probably syphilis, of the latter.

Some striking examples were quoted by Dr. John W. Moore, of Dublin, in a paper he read last winter on this subject.

Thus Mercatus asserts that before the beginning of autumn, in the year 1557, influenza attacked all parts of Spain *at once*, so that the greatest part of the population in that kingdom were seized with the disease almost on the same day. At St. Petersburg, in the epidemic of 1782, Maertens says, that on a cold night the thermometer rose 30 degrees Fahrenheit, and next morning 40,000 people were taken ill with the influenza. We can readily imagine what serious consequences might possibly attend outbreaks of sickness such as these, although they would not necessarily leave their mark upon the statistics of mortality.

Again, under ordinary circumstances the prevalence, or otherwise, of an endemic disease stands in no direct relation to the published returns of mortality attributed to it. The argument in favor of registration of disease deducible from this fact applies *à fortiori* in the instance of an epidemic, where the ratio of cases to deaths is of a most varying and uncertain character.

Difficulties, no doubt, stand in the way of carrying out an effective system of disease registration, but they are not insurmountable, and the fact that several European governments have long since inaugurated and prosecuted such a system should encourage us in essaying to follow their example. In the vanguard of progress in this direction the Scandinavian nations occupy the place of honor.

For many years back the College of Health at Stockholm has received monthly and annual reports of the sanitary state of the country, including an account of the prevailing endemic and epidemic diseases, from a corps of officially appointed medical men, styled provincial and district physicians, subsidized by the State. The monthly reports furnished by these physicians are published from time to time in the Swedish medical periodical, *Hygiea*, while the annual returns are compiled and arranged by an official whom we may call the Swedish Registrar General, and are finally presented to the king in the form of a volume of official reports and tables.

A similar organization exists in both Norway and Denmark—so far, at all events, as relates to the registration of epidemic diseases. In the "Weekly Report of Diseases, Deaths, and Births, in Copenhagen," communicated by Dr. P. A. Schleisner, Medical Officer of Health, and published by authority of the Municipal Council, the first table gives the cases of epidemic and con-

tagious (infectious) diseases reported to him by the medical men practicing in the Danish Capital. The notification of these affections is compulsory.

The effort is earnestly in progress in Great Britain, to make the report, at least of all contagious and infectious diseases, compulsory.

The scope of such a report is given in the following extract from the proposed bill:—

"Every medical practitioner attending on or called in to visit such inmate shall, on becoming aware that such inmate is suffering from any such disease as aforesaid, forthwith fill up, sign, and deliver to the occupier or person having the management or control of the building, or, in case such person is suffering from such disease, to the person in charge of such inmate, a certificate stating, according to the forms prescribed and supplied to him by the corporation, the name of such inmate, the situation of such building, and the name of such occupier or person, and the nature of the disease from which such inmate is suffering."

It would be more satisfactory and congenial to Democratic tastes, were this done generally by physicians, without the fear of law before their eyes.

Why would it be impossible so to impress the practitioner of medicine with the importance of the information that he would, at the close of each week, fill up a printed form giving the new cases, of all kinds, which had come under his care during the week? Nearly all physicians keep such records, and their tabulation would be the work of less than half an hour in quite an extensive practice. Certain errors, as of duplicating cases, etc., could readily be eliminated.

Such weekly reports, forwarded promptly to some central office of the county, properly digested and published, would infallibly prove of the highest utility, and offer the authorities the means of providing far better for the general health than do the present inefficient plans.

MEASURES AGAINST TRICHINOSIS.

Several severe outbreaks of trichinosis, some resulting in the death of a number of individuals, occurring not only in Germany but in England, have led the medical authorities of European States to take measures of greater vigilance for the protection of the people against this disease.

Certain insidious forms in which it appears seem also to justify the supposition that it is more frequent than is generally supposed, and is very liable to be mistaken for some common complaints. Thus it is by no means easy to differentiate certain cases from typhoid fever. The general symptoms and course of the disease to a fatal conclusion may be deceptively alike. No doubt, not a few cases of supposed typhoid, arising in country localities, for which the family and the physician searched in vain for an existing cause, were in fact trichinous disease.

Another form in which it is sometimes found assimilates muscular rheumatism. The limbs are stiff and painful, and may remain in this condition for a long time.

When in an acute form, after the ingestion of considerable trichinous flesh, the attack is of the gravest character. No practically valuable suggestions as to its treatment appear to have been made. Ergot, kerosene and oil of turpentine have been from time to time brought forward as alleged destructives of the parasites; but their claims have not been substantiated by clinical experience.

The only safeguard is to adopt thorough and rigid preventive measures, closely examining the flesh of hogs when slaughtered, and rejecting all that is found to contain trichinæ. This is what has been done abroad. It is announced from Berlin that, in consequence of the numerous cases of trichinosis recently observed, the authorities of that city have taken very severe steps concerning the execution of the measures for the inspection of pork exposed for sale. This inspection is carried out with the aid of a microscope; and the following are the measures now adopted in Berlin: Whoever slaughters a pig, or has one slaughtered, with the intention of selling its meat, or of making any kind of sausage with the meat, is bound to have it examined after slaughter by an inspector of meat, who with the aid of a microscope assures himself of the presence or absence of trichinæ. The meat cannot

be cut up, except after the certificate of the inspector has been given, affirming that it is exempt from trichinæ, and after the inspector's seal has been put upon the slaughtered animal. Any contravention of this order is punished by a fine of three to thirty marks, or imprisonment.

With our present laxity in sanitary laws, it were hopeless to expect that such strictness as this would be countenanced, even though the health of the public were jeopardized by the neglect of such precautions.

Fortunately, the authorities are of accord that thorough cooking will destroy the vitality of the parasite, and this is a precaution all can take. Smoking and salting the flesh only partly does away with its toxic qualities. These measures cannot therefore be depended upon. A temperature at or above the boiling point is needed. As the trichinæ are very rarely found in any other flesh used for consumption than that which is derived from swine, eaters of this should make it a rule to insist on its being extra "well done."

Notes and Comments.

Therapeutical Notes.

THYMIC ACID MIXTURE FOR DIPHTHERIA.

Dr. Jos. H. Warren, of Boston, writes, in the *Virginia Medical Monthly*, that he has for the last few years been using the following medicine in all of his cases of diphtheria and diphtheritic sore throats, with a success that he never attained with any other form of medication:—

℞.	Glycerine,	℥ ij
	Thymic acid,	gr. iv to vj
	Chlorate of potash,	ʒ iiss
	Bi-sulph. quinine,	ʒ ss to ʒ j
	Brandy (very old),	℥ vj M.

Sig.—To a child from two years up to five, a teaspoonful every hour or two, according to the urgency of the disease. Increase the dose from this age upward, to ʒ iv. Let the patient take it without any water, if possible, as by so doing he will get the stimulating effect on the throat, and thus avoid the use of anything for a gargle.

This is, says he, a fine formula to use as a prophylactic agent for this disease, and malaria and other affections of similar origin.

By adding a few drops of the muriated tincture of iron to each teaspoonful or dose, we have one of the very best of tonics, and it will be found useful in many cases after typhoid fever, attended with diarrhœa, or in ulceration of the mucous membrane of the stomach and bowels. If the food distresses it will be of great advantage if we add a few grains of true pepsin porci, of Muson's, or ingluvin, manufactured by Warner & Co.; particularly the latter medicine, in atonic dyspepsia and some forms of chronic indigestion, accompanied with nausea after taking food.

For atomizing the throat he uses the following formula:—

℞.	Glycerine,	℥ j
	Thymic acid,	gr. vj to x
	Borate of soda,	ʒ iv
	Camphor water,	℥ iv
	Tar water,	℥ v. M. Filter.

Sig.—Atomize freely every two or three hours.

The glycerine is added to cut the thymic acid and hold it in solution.

PHOSPHATE OF ZINC IN DIARRHŒA.

According to *Bull. Gen. de Thérap.*, May 15th, 1880, M. Tedenat usually employs this salt of zinc in preference to the nitrate, chiefly on account of its greater insolubility in the acid juices of the stomach. Its action as a remedy in diarrhœa is the same as that of the nitrate, but the dose is less—1–2 grams. It may be given in precisely the same way as the nitrate.

BALSAM OF PERU IN PRURITUS.

In a communication to the *Deutsche Med. Wochen.*, Dr. Auerbach, of Berlin, states that having, in common with so many other practitioners, found the balsam of Peru a most valuable remedy in itch, he has for some time past used it in the treatment of pruritus with the greatest success. After the first rubbing into the part affected great relief is obtained, and in a few days a cure results. He relates a very obstinate case which, after resisting all kinds of treatment for years, was speedily cured by the balsam.

The Arciform Fibres of the Medulla Oblongata.

The *Lancet*, July 24th, 1880, states that M. Luys has made an interesting communication to the Société de Biologie on the subject of the connections of the arciform fibres of the medulla oblongata. He maintains that they are nothing more than the terminations of the inferior cerebellar peduncles. After these have reached the lateral parts of the medulla, the fibres pass obliquely into this region, and increase its size by passing between the ascending fasciculi from the spinal cord. Some of the fibres, however, pass into the interior of the medulla, and these are the concentric fibres which form so conspic-

nous a feature in all transverse sections of the medulla. That part of the fibres which apparently remains on the external surface of the medulla, and extends on the restiform bodies and anterior pyramids, presents great variations in direction and terminal distribution. Some of the fibres surround the olivary bodies, and penetrate the median raphe; while others have a serpentine direction toward the pons. The conspicuous fact regarding these fibres is that, whatever be their course, all seem to decussate at the middle line, and this decussation in fact constitutes the median raphe, the significance of which has not been accurately estimated. The ultimate destination of these fibres is still uncertain. M. Luys thinks it probable that, after decussating they enter one of the deposits of gray matter which are seen close to the raphe, and which are composed of large cells with interlacing processes. Others probably pass to the network of cells of the olivary bodies on the side opposite to that on which they entered the medulla from the cerebellum. In support of these views, he showed sections from a case of congenital atrophy of one lobe of the cerebellum. The inferior cerebellar peduncle on that side was completely atrophied, and so also was the olivary body on the opposite, which contrasted strikingly with the full development of the olivary body on the same side. This important observation speaks strongly for the view advanced by M. Luys, that there is an intimate connection between the olivary bodies and the cerebellar fibres.

Septic Embolism of the Eye Occurring in Puerperal Fever.

Hirschberg is of opinion that the metastatic inflammation of the uveal tract has not as yet sufficiently engaged the attention of ophthalmologists. He has observed six cases in all, in three of which both eyes were affected, and describes minutely in *Archiv f. Augenheilkunde*, vol. ix, 3, the symptoms and post-mortem appearances in one which he was able to follow almost from the beginning. The patient, aged 34, whose puerperal attack came on sixteen days after the birth of her third child, complained on the twenty-first day of great pain in the eye; thirty-six hours afterward the condition was as follows: Slight chemosis, cornea clear, semilunar-shaped hypopyon covering half the breadth of the iris below; pupil semi-dilated under atropine, central exudation on the anterior capsule, leaving a clear margin, V = fingers at 2′. Next morning complete blindness of right eye. The left, which was unaffected the day before, was now almost blind. With the ophthalmoscope a medium-sized hemorrhage could be made out, surrounded by a grayish-white area, "a septic embolism of a small retinal vessel, certainly of only a few hours' standing." Next day complete blindness and a copious thick exudation covering the iris. Death on the thirty-second day after confinement. At the post-mortem examination the right eyeball was opened, and the retina found to be destroyed by suppuration and the vitreous infiltrated with pus. The left was hardened in Müller's fluid and examined microscopically after some months, when the principal changes were found to be in the retina. The embolic nature of the intra-ocular process was first demonstrated by Virchow, while the septic character of the embolism has been made out by Heiberg and Litten. The difference between ordinary septic embolism is thus put by Hirschberg: "Ordinary embolism causes sudden blindness of the affected eye, accompanied by the well known ophthalmoscopic appearances, and ends in atrophy of the optic nerve and retina. Septic embolism, whether of a retinal or choroidal artery, rapidly gives rise to a disturbance of vision, usually associated with a veiling of the fundus, and ends in suppurative inflammation of the retina, vitreous, choroid, iris, etc. With septic embolism of a very small branch some amount of vision may be retained for some hours or days, until suppuration in the fundus brings about complete blindness; aseptic embolism of the same branch might, under certain circumstances, completely escape detection."

The Structure of Spermatozoa.

The *Lancet*, July 24th, 1880, informs us that in the current number of the *Quarterly Journal of Microscopical Science* is a short paper by Dr. Heneage Gibbes, in which he states that he has found the spiral filament discovered by him in the spermatozoa of several species of animals, as the rat, mouse, axolotl, pigeon, fowl, snail, and leech. In the examination of different specimens of human spermatozoa, he has noticed a variation in the length of the tails, and in one specimen he found a number of heads with no corresponding tails. He throws out the suggestion that these variations may have some important bearing. It is quite possible that tailless spermatozoa may not be able to fertilize the ovum, while the greater the length of the tail the greater their locomotion and fertilizing power may be. Dr. O. S. Jensen, of Bergen, has found the spiral filament in the semen of horses; and Professor

Fleming, of Kiel, has also confirmed Dr. Gibbes's observations, both as to the existence of this filament, with its mesentery, and the different reaction to staining fluids of the head and middle part of spermatozoa.

The Constituents of Tobacco Smoke.

The *British Medical Journal*, July 17th, 1880, informs us that MM. G. Le Bon and G. Noel, in a recent note communicated to the Paris Académie des Sciences, assert that they have extracted from tobacco smoke, 1. Prussic acid; 2. An alkaloid, having an agreeable odor, but dangerous to breathe, and as poisonous as nicotine, since a dose of one-twentieth of a grain destroys animal life; 3. Aromatic principles as yet undertermined, which contribute, with the above-mentioned alkaloid, to give to tobacco its characteristic odor. MM. Le Bon and Noel say that tobacco smoke owes the toxic properties attributed hitherto solely to the nicotine contained in it, as much as to the other substances they have discovered in it. The alkaloid pointed out seems to be identical with the compound known as collidine, of which the existence had already been noted in the course of distillation of several organic substances, but of which the toxic and physiological properties were overlooked. Collidine, however, plays a fundamental part in tobacco smoke; and it is to its presence that certain kinds of tobacco, comparatively poor in nicotine, and yet very strong in smoking, owe their properties.

Digital Compression of Aneurisms.

Dr. Pize, in *Bulletin de Thérapeutique*, April 30th, 1880, condemns the teaching of Bellingham and Broca, to the effect that total compression gives rise to the formation of soft or passive clots in an aneurism, while partial compression favors the formation of solid fibrinous clots, which alone conduce to repair. The author advocates the retention of digital compression during the first twenty-four or forty-eight hours, after which it should be intermitted at night, to allow the patient to sleep. He considers that total digital compression offers advantages over any other means of treatment, inasmuch as (1) it is not dangerous; (2) it is more rapid in its action; (3) it is more often successful, and gives more brilliant results; (4) it has succeeded in cases in which partial compression has failed. He says that the reason why this treatment is most successful is because it most conduces to coagulation of blood within the aneurismal sac.

Acid Reaction in Animal Tissue.

Marie Ekunina describes, in the *Journal für Praktische Chemie*, an investigation conducted in Prof. Nencke's laboratory at Berne, on the causes of acid reaction of the animal tissues after death. This reaction is attributed to the decomposition of tissue juices, after death, by fungi. Volatile fatty acids first arise through commencing decomposition of albumen, but very soon the two lactic acids proceeding from glycogen are associated with these. The richer the tissue in carbo-hydrates, the longer does the acid reaction continue after death; this is especially the case with liver, muscles, and lungs. The shortest and weakest acid reaction is that in the pancreas. Sooner or later, in all tissues, the acid reaction passes over into an alkaline, while the decomposition of albumen increases, and there is much formation of ammonia.

CORRESPONDENCE.

The Habit of Making Believe.

ED. MED. AND SURG. REPORTER.

"It is the practice of acting as if the creations of the physician's imagination were realities, without ascertaining whether they were so or not, that has proved so fatal to the progress of medicine; and it is only through the diligent comparison of ideas with facts, by observation and experiment, that we can hope for its advance."

This quotation is the concluding paragraph of Dr. Lauder Brunton's first Goulstonian Lecture before the Royal College of Physicians, in 1877. The truthfulness of the statement—that fancy had held the place which knowledge should hold—is quite plain, and it is a lamentable fact that the same statement is to a great extent correct, if applied to the modes of thought and practice of the present day, especially as to the so-called malarial diseases. Fancy, imagination, hypothesis, have been about the entire stock of materials of which our so-called malarial pictures have been constructed in our minds. On page 10, loc. cit., Dr. Brunton gives this: "We know that if a man pass through certain districts, and more especially if he sleep in them, he is likely to be attacked with a fit of shivering, which, often lasting some time, will be succeeded by a burning fever and then by profuse sweating, after which he will feel comparatively well until the next day, when another shivering fit will come on at the same hour, and run the same course as the first. We know that by warning the man against the dangerous locality, or by making him adopt certain precautions, take cinchona alkaloids, if he cannot avoid the place, we may be able to prevent the disease; by administering one large dose of quinine before a paroxysm we may stop its approach, and by continuing the remedy we may prevent its occurrence altogether. But we are ignorant

of the nature of malaria, as we term the cause of these paroxysms, whatever it may be. We do not know how it acts on the bodily mechanism, so as to cause them. We have no notion of the manner in which quinine counteracts the malarial effects, or why quinine should sometimes fail and arsenic prove efficacious."

* * * * * * * * * *

We may say that the immediate cause of the ague fit is probably due to the intense irritation of the vaso-motor centre in the medulla oblongata, but we have no idea of the nature of the irritant, and we cannot even guess why the irritation should occur at regular intervals. We do not know the changes in the nervous system and tissues which occur during the intermissions, and we are utterly at a loss to explain why a man should come from a malarious district in India and die of jungle fever in England, although he had never had it while abroad and it is never seen in residents at home."

The language quoted presents some important thoughts and facts, but it gives only a part of the facts which bear upon the subject of the malarial diseases; it does tell the truth, but not the *whole* truth. A man exposed, as stated, to the Pontine marshes, for instance, may present other symptoms than those of intermittent fever; he may have a choleraic attack, a diarrhœa or dysentery, a headache, a catarrh of the mucous surfaces; he may be attacked even with a fatal pernicious congestion, as it is termed; or he may have a continued fever; or he may only suffer from general malaise, or from chronic malarial cachexia in the course of time, without having had any previous urgent symptoms.

The language of Dr. Brunton plainly shows that it is built upon the fancy of a certain specific organic germ, or something as being the cause of the malarial diseases. His idea of the disease is narrowed and distorted by his fancy as to what constitutes its cause. If the symptoms he gives included all the manifestations of malarial disease—all the primary and direct manifestations—it would be reasonable to believe, to imagine at least, that the cause of it was a specific organized germ; but the symptoms he gives the disease which he states as being likely to follow certain exposure is but a very small, although a very misleading part of the *whole* truth.

The language given is misleading in another respect; it says, "a man passing through certain districts, and more especially if he sleep in them, etc., etc." We are led to infer that it is only in certain relatively small districts that the cause of the disease exists, which we know is contrary to the facts. In at least one-half of the whole territory of the United States, if a man expose himself to the burning heat of the sun during the day and the shock of cold winds and moisture during the night, *especially when asleep*, he will be attacked by precisely the same disease as when exposed to the influences of the "certain districts" alluded to by Dr. Brunton; and what is more striking yet, he never will take the disease mentioned unless he is subjected to great variations and extremes in temperature and humidity, and when he is thus subjected he hardly ever escapes, whatever "certain districts" he may be in or "passing through."

It is quite apparent that the fancy of a specific germ, as being the cause of the malarious diseases, causes us to have so narrow a view of this subject as to prevent us from seeing more than a very small fraction of the *whole* truth. The import of the statement in regard to "*a man* being attacked by *intermittent fever* upon passing through certain districts, etc., also is that *any man* so passing through, etc., would be thus affected, which is contrary to the facts; only such as have acquired *l'aptitude ou l'imminence morbide* from climatic influences are in danger of becoming thus affected. A man in good health, from the mountains of Switzerland, passing at once from his home through these "certain districts," sheltering himself from the heat of the sun during the day and the chill of the air at night, maintaining a good blood pressure, will escape the disease in question, while the man whose *tone* has become depressed will have great difficulty to prevent the disease, unless he resort to artifical means to maintain his blood pressure at a healthful point by the tonic influence of the cinchona alkaloids, etc.

Another objection to the statement "that if a man pass through certain districts," etc., he is likely to be attacked, etc., lies in the matter of time when the probable attack may occur. The inference would be that it will appear promptly, and that if it does appear at all it will do so after the lapse of about the same period of time in all cases, which is contrary to the facts, as Dr. Brunton himself states in the case of "a man dying of jungle fever in England, although he never had the disease in India."

Toward the close of the lines quoted from Dr. Brunton's book, we find this: "But we are ignorant of the nature of malaria," etc. If this means to say that we are ignorant of it, as to its being a specific organized germ, we can all readily agree, and what is more that can be truly proclaimed is, that we shall so remain ignorant. But if we add the last clause, "whatever it may be," then we submit there is no foundation for the statement. If we do not *know* anything that has not been impressed upon our minds by way of one or more of our five external senses, then we can at once admit that we do not *know* the nature of malaria, and can also safely assert that we never shall *know*. But if we *know* that we have mind, intellect, reason, feeling; if we *know* anything that has come to our knowledge not by way of our external senses: if we *know* the physiology of the vaso-motor ganglionic and sympathetic nervous system, and its reflex activities, and if we know the surroundings which stimulate, irritate or impress and depress this sensitive organism, then we do *know* what causes the so-called malarial diseases.

And all that follows the quotation last referred to is so plainly shaped and colored by the fancy of a specific organized germ, by the "wrong method" which Dr. Brunton laments and labors to remove, as being one of the causes of the slow progress of medical science, that we are fully convinced "that this practice of making believe" (see page 16) is not a mere childish folly unworthy of a moment's consideration, but the outcome of a deeply-rooted tendency of the hu-

man mind, and therefore deserving of most serious attention." It caused Dr. Brunton to "make believe" that we do not know what we really *do know* as well as it is possible to know a physiological or pathological fact of this nature.

Shelbyville, Ill. CHARLES T. REDER.

NEWS AND MISCELLANY.

Why We Eat Oysters Raw.

We take the following from the London *Medical Record*, July 15th, 1880:—

Dr. William Roberts, in his interesting lectures on the digestive ferments, states that our practice in regard to the oyster is quite exceptional, and furnishes a striking example of the general correctness of the popular judgment on dietetic questions. The oyster is almost the only animal substance which we eat habitually, and by preference, in the raw or uncooked state; and it is interesting to know that there is a sound physiological reason at the bottom of this preference. The fawn-colored mass which constitutes the dainty of the oyster is its liver, and this is little else than a heap of glycogen. Associated with the glycogen, but withheld from actual contact with it during life, is its appropriate digestive ferment—the hepatic diastase. The mere crushing of the dainty between the teeth brings these two bodies together, and the glycogen is as once digested without other help by its own diastase. The oyster in the uncooked state, or merely warmed, is, in fact, self-digestive. But the advantage of this provision is wholly lost by cooking; for the heat employed immediately destroys the associated ferment, and a cooked oyster has to be digested, like any other food, by the eater's own digestive powers.

How the "Finest Wines" are Made.

The *Medical Times and Gazette* informs us that the German Government, hearing that the wine-growers of Baden, in the face of several successive years of defective vintage, were actually manufacturing an increased quantity of the "finest wines," instituted inquiries which resulted in the discovery that large quantities of spirit have been imported into Baden (not direct, but by circuitous means), to be manufactured, bottled, and sold as the real product of the German grape. The police have suddenly appeared upon the scene, and the Government seal has been affixed to a great number of casks of supposed genuine wine which are to be tested by the public analyst. One great house, which has hitherto enjoyed public confidence in an unlimited degree, is said to be marked out for prosecution. It appears that this firm has done business to the amount of 500,000 marks since the beginning of the present year, and the police are in possession of evidence that it has purchased no less than 300,000 marks' worth of foreign spirit in an underhand manner. It is stated that the German vintagers have obtained from Paris a "clever artist" who has proved that it is just as easy to produce chemical hocks as chemical clarets.

The Salubrity of the Isthmus of Panama.

The following interesting note, says the *British Medical Journal*, was presented at the *séance* of the Académie des Sciences of Paris, held on June 28th, by M. de Lesseps: "Much has been said lately on Panama, especially in the United States, about the yellow fever existing there. The rare cases of this fever that do occur there prove that the disease neither originates nor spreads in the district. Several ships with numbers of patients on board suffering from very characteristic yellow fever, arrived lately. There being no one authorized to prevent passengers from the infected ships landing, they have done so, and pretended that those who died of the disease from which they themselves were suffering were victims to the climate. There are no sanitary precautions and hygienic rules at Panama, any more than at Colon. Nevertheless, the fever imported has not spread beyond the persons affected before their landing. This is surely evident proof of the salubrity of the Isthmus of Panama, which, from its situation between the two oceans, receives in turn and without intermission the healthy breezes of the Atlantic and of the Pacific."

Dr. Tanner at the Completion of his Fast.

Probably no man has ever been more anxiously waiting for the sound of the breakfast bell than Dr. Tanner was last Saturday. For several days he had been in an extremely critical condition. His weight was reduced to 121½ pounds, showing a loss of thirty-six pounds since he had taken his last meal. As soon as the clock struck twelve he eagerly devoured a peach, which he had been fondling for more than two hours, and washed it down with a glass of milk. He next ate a large piece of watermelon, and during the afternoon he ate several pieces, swallowing the juice only. He also had some beefsteak and several glasses of Hungarian wine, his stomach showing no indication of rebellion, and he stated that in two days he would be able to walk about and attend to his business as usual.

OBITUARY NOTICES.

—Professor Paul Broca, the eminent anthropologist and statesman died suddenly, at midnight, July 8th, at the age of fifty-six years. "The surprise and deep regret," says the *Lancet*, "which this unexpected event created, not only in the medical but in the general public, can only be appreciated by those who knew how deep an influence the celebrated Professor had obtained over the minds of those who in France lead an intellectual life."

—Dr. Stephen H. Ward, for many years physician to the Seamen's Hospital, Greenwich, and to the Hospital for Diseases of the Chest, died at his residence, No. 28 Finsbury Circle, of disease of the heart and liver, on the 10th of July.

MARRIAGES.

GLASGOW—McPHEETERS.—At Fincastle, Va., June 30th, by Rev. D. W. Shanks, Dr. Robert Glasgow and Kate L., daughter of the late Dr. A. B. McPheeters.